



May 8, 2009

Mr. Steven J. Faryan  
U.S. EPA Region 5  
Emergency Response Branch  
On-Scene Coordinator  
77 W. Jackson Blvd.  
Chicago, IL. 60604

RE: Elgin Salvage Yard – 20 Jefferson Avenue Site  
Elgin, IL 60120  
Removal Action Work Plan – Drums and Cylinders  
Terracon Project No. 11077052

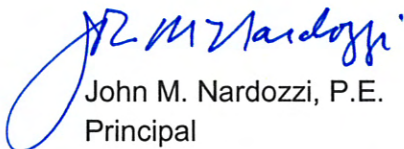
Dear Mr. Faryan:

On behalf of our client, the City of Elgin, we are transmitting the Removal Action Work Plan as a pdf document for the drums and cylinders at the 20 Jefferson Avenue Site in Elgin, Illinois. The work plan has been prepared in response to your request.

By copy to Mr. Edward Salch of the Illinois Environmental Protection Agency (IEPA), we are submitting this Work Plan to IEPA for their information as the site is currently enrolled in the Site Remediation Program.

If you have any questions or comments regarding the plan, please feel free to contact the undersigned or Mr. Ray Moller of the City of Elgin at 847 931 6749.

Sincerely,



John M. Nardozi, P.E.  
Principal

cc: Mr. Edward Salch – Illinois Environmental Protection Agency  
Ref: IEPA LPC No. 0894385681  
(2 hard copies)  
Mr. Raymond H. Moller – City of Elgin



**REMOVAL ACTION WORK PLAN  
for  
ELGIN SALVAGE YARD – JEFFERSON AVENUE SITE  
20 JEFFERSON AVENUE  
ELGIN, ILLINOIS**

**Terracon Project No. 11077052**

**Prepared for the:**

**CITY OF ELGIN  
Elgin, Illinois**

**Prepared by:**

**Terracon**

**135 Ambassador Drive  
Naperville, Illinois 60540**

**May 8, 2009**

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<sup>1</sup> Selected Exhibits to the Facility Site Profile are omitted for brevity; these items can be provided upon request.

**REMOVAL ACTION WORK PLAN**  
**for**  
**ELGIN SALVAGE YARD – JEFFERSON SITE**  
**20 JEFFERSON AVENUE**  
**ELGIN, ILLINOIS**  
**May 8, 2009**

## **1.0 INTRODUCTION**

### **1.1 Site Background and Project Summary**

This Removal Action Work Plan was prepared by Terracon Consultants, Inc. (Terracon) on behalf of the City of Elgin in conjunction with information provided by SET Environmental, Inc. (SET) to address the removal and disposal of selected drums of unknown material and gas cylinders that are present at the 20 Jefferson Avenue site in Elgin, Illinois. The United States Environmental Protection Agency (USEPA) has agreed to perform additional soil removal actions at the site in accordance with a Removal Plan prepared by Conestoga-Rovers & Associates (CRA) dated February 2009<sup>2</sup>. The removal actions planned by CRA are intended to achieve soil remediation in accordance with remedial objectives established by USEPA. The drums and cylinders that are the subject of this work plan are located on the concrete floor slab of the open storage shed and are in the way of the proposed USEPA clean up activity. To facilitate USEPA's plan, the City of Elgin has agreed to undertake the removal and disposal of the drums and cylinders on a voluntary basis as described herein.

### **1.2 Site Description**

The 20 Jefferson Avenue site is located in the City of Elgin, Kane County, Illinois. The site encompasses the property bound by Jefferson Avenue to the south, the Kane County Bike Path to the west, and residential properties to the north and east of the site. A site location map is provided on Figure 1.

The 20 Jefferson Site is approximately 1.2 acres and is occupied by a single story shed. Approximately two-thirds of the site is open yard space that is covered with gravel. The open shed is an L-shaped, wood framed structure that has been used primarily for storage of scrap yard materials. A small office section is located in the far southeast portion of the building. The shed is currently in a state of disrepair and sections of the roof have collapsed; the office area indicates significant fire damage. The north to south oriented portion of the shed is constructed on a concrete slab foundation. The majority of the east to west oriented section of the shed has a dirt floor. Figure 2 presents a site base map showing the site in relation to surrounding properties.

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<sup>2</sup> Conestoga-Rovers & Associates (CRA) 2009. Removal Plan, Jefferson Yard, 20 Jefferson Avenue, Elgin, Illinois. February 2009.

## **2.0 BACKGROUND**

### **2.1 Site Information**

The site was historically operated by the Elgin Salvage and Supply Company as a non-ferrous scrap yard. A removal action was completed in 1995 when 2,600 cubic yards (CY) of contaminated soil was removed under the direction of USEPA. The 1995 remediation work is documented in a Removal Action Completion Report prepared by CRA and dated May 1995<sup>3</sup>. Following the 1995 removal action, the site continued in operation as a scrap yard until 2003 or 2004. During the later period of operation, Ericor Metals, Inc. operated the facility.

The City of Elgin acquired the site in 2004. Since the City acquired the site, no active industrial operations have been conducted on-site.

The drums and cylinders that are the subject of this work plan are believed to be scrap materials accumulated by the former site operators, Elgin Salvage and Supply Company and/or Ericor Metals. The drums and cylinders were reportedly present on-site in 2003 when Terracon conducted a Phase I Environmental Site Assessment<sup>4</sup> as part of the City's pre-acquisition due diligence. The Phase I ESA specifically noted:

Terracon observed approximately 20 empty 55-gallon drums and several 55-gallon drums of unknown materials at the Jefferson Parcel portion of the site. Mr. Seldomridge [Gene Seldomridge, representative of Ericor Metals, the site operator at the time of the Phase I] was not aware of the contents of the drums. Terracon did not observe staining or evidence of leaks in the vicinity of the 55-gallon drums. Mr. Seldomridge reported that the drums (both empty and potential material containing) in this area of the site were transported to this portion of the site for storage after the CERCLIS clean-up activities were completed. The drums containing unknown materials constitute a REC [recognized environmental condition].

Although the City subsequently obtained title to the property, it is the City's position that the drums and cylinders, as described for removal and disposal herein, were and continue to remain the property of the former site operator(s).

The City of Elgin has enrolled the site into the Illinois Environmental Protection Agency's (IEPA's) Site Remediation Program (SRP) with the intent of obtaining a comprehensive

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<sup>3</sup> Conestoga-Rovers and Associates, Removal Action Construction Report, Elgin Salvage & Supply Site. May 1, 1995.

<sup>4</sup> Terracon Consultants, Inc., Phase I Environmental Site Assessment, Elgin Salvage, 20 Jefferson Avenue and 464 McBride Street, Elgin, Illinois. December 23, 2003.

No Further Remediation (NFR) letter to facilitate future site redevelopment plans. The site is identified as LPC No. 0894385681. Since the site is active within the SRP, the City is submitting a copy of this Work Plan to the IEPA for their information; a copy of SRP Form DRM-2 is provided in Appendix A.

## 2.2 Drum and Cylinder Description

The following table summarizes the preliminary inventory of the existing on-site drums and cylinders of materials scheduled for removal under this RAP.

Table 1 Preliminary Inventory of Drums and Cylinders 20 Jefferson Avenue Elgin, IL		
Item	Location/Description	Qty./Material/Description
Drum Set No.1	South end of Open Shed, Drums stacked 4 rows high on concrete floor. Most drums in poor condition.	19 - 55-gal drums 2 - White sacks with dry, sand-like material. 1 - 55-gal. drum with open top, approx. ½ full of oily substance
 		



Gas Cylinder Set No. 1	Gas cylinders in steel tote boxes. Variety of cylinder sizes and types. Not all cylinders could be readily observed.	4 - LPG Industrial gas cylinders 1 - Propane cylinder 4 - Oxygen cylinders
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Drum Set No. 2	Central portion of open shed. Drums stacked three rows high on pallets. Many drums in poor condition without tops. White drums in foreground are apparent magnesium chips/cuttings based on drum labels.	8 - 55-gal drums with apparent magnesium chips/cuttings 43 - 55-gal drums with apparent metal slag type material
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Gas Cylinder Set No. 2	Central portion of Open Shed. Cylinders contained in steel tote box. Not all cylinders could be readily observed.	16 - tall gas cylinders 3 - short gas cylinders 11 - large diameter gas cylinders Various fire extinguishers
		
Gas Cylinder Set No. 3	Toward north end of the Open Shed. One large grouping of cylinders shown, several individual cylinders scattered in area.	28 - gas cylinders 6 - fire extinguishers and multiple smaller cylinders in wire frame tote box.
		



Drum Set No. 3	North end of Open Shed.	2 – 55-gal drums (open) with steel parts/debris.
		
<p>Notes: Drum and cylinder quantities are approximate. Where drums are stacked, the actual number of drums could not be accurately counted as some drums may be obscured. Likewise, many of the cylinders are dumped in large totes; the actual number of cylinders cannot be accurately observed. Photographs taken March 24, 2009.</p>		

### 2.3 Laboratory Analysis of Selected Drummed Materials

In April, 2008, USEPA commissioned further site assessment work at the 20 Jefferson site. As part of this supplemental site assessment work, USEPA's Superfund Technical Assessment and Response Team (START) and contractor, Weston Solutions, Inc. (Weston), conducted sampling of four of the on-site drums for general assessment and characterization of the on-site drummed materials. As noted in Weston's Site Assessment Report<sup>5</sup>, four drums containing slag material, magnesium turnings, and sand were sampled for polychlorinated biphenyl (PCBs), Total Metals, Toxicity Characteristic Leaching Procedure (TCLP) Metals and Dioxins and Furans on April 24, 2008. The analytical results are summarized as follows:

- PCBs - PCBs (particularly Aroclor 1248) were noted in two of the four samples at concentrations of 68 and 97 micrograms per kilogram (ug/kg) in samples ES-DRUM -02 and ES-DRUM-03, respectively.
- Total Metals - Several metals were detected in the drum samples, including arsenic, barium, cadmium, chromium, lead, selenium and silver.
- TCLP Metals – Analysis by TCLP for the eight Resource Conservation and Recovery Act (RCRA) metals indicated concentrations below the laboratory

<sup>5</sup> Weston Solutions, Inc. (Weston), 2008. Site Assessment Report for The Elgin Salvage Site, Elgin, Kane County, Illinois. June 9, 2008.

reporting limit for parameters except for chromium. TCLP chromium was reported at concentrations of 0.146 and 0.154 in samples ES-DRUM-03 and ES-DRUM-04, respectively.

- Dioxins and Furans – Dioxins and furans were detected in all four drum samples at low concentrations ranging from 0.565 to 13.5 ppt TEQ.

The Site Assessment Report noted that the TCLP results did not exceed the toxicity regulatory criteria. Weston concluded that the drums of slag, magnesium turnings, ash, and other unknown materials, as well as the gas cylinders pose an imminent and substantial threat to human health and the environment. Weston recommended that all drums and gas cylinders be removed from the site.

Tables 1-3 summarizing the analytical results and excerpted from the Weston report are provided in Appendix B.

### **3.0 PROJECT OBJECTIVE AND IMPLEMENTATION**

#### **3.1 Project Objective**

The purpose of this project is to properly and safely remove and dispose of the subject drum and cylinders materials from the site to facilitate further clean up actions at the site. In accordance with USEPA's request, the City of Elgin has agreed to undertake the removal action to facilitate and expedite the process. Per the USEPA's directive, the removal action is planned so as to comply with applicable requirements under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Contingency Plan. Specifically, the work proposed herein is to be carried out to meet the requirements of CERCLA related to staging, storage, transportation and disposal of the materials. In particular, the USEPA requests that the disposal facility selected for the project be in compliance with the CERCLA off-site policy.

#### **3.2 Implementation**

To comply with USEPA's directive, the City of Elgin intends to implement the removal action on a voluntary, cooperative basis using the following consultants and contractors:

##### **3.2.1 Environmental Consultant**

Terracon Consultants, Inc. (Terracon) will be retained by the City to provide environmental consulting support for the project. Terracon's responsibilities will include:

- Preparation of a Removal Action Work Plan (this document);
- Coordination with the City of Elgin, USEPA, and the Remediation/Disposal Contractor;
- Prepare a Health and Safety Plan for Terracon's on-site activities;
- Observation of the on-site remedial activities including the staging, sampling, and handling and loading of the materials; and
- Documentation of the removal action in a written report.

##### **3.2.2 Remediation/Disposal Contractor**

The City intends to enter a contract (or subcontract through the Environmental Consultant) with a remediation/disposal contractor to perform the services necessary to stage, sample, inventory, load, transport and dispose of the materials. The proposed contractor is SET Environmental, Inc. of Wheeling, Illinois (SET). SET will also be tasked with the preparation of its own health and safety plan to address the proposed on-site operations, a copy of which will be provided to USEPA.

#### **4.0 DRUM AND CYLINDER REMOVAL PLAN**

This section describes the plan that will be implemented to accomplish the project objectives. The plan is based on conducting a two phase process with respect to the drum and gas cylinder materials. Phase I entails the preliminary evaluation of the gas cylinders and drum materials so that the materials may be properly staged on-site in accordance with health and safety provisions and an accurate inventory of the materials can be obtained. During Phase I the gas cylinders will be evaluated to determine which can be safely shipped in their current condition and which may require over packing to comply with transportation requirements. Phase II of the process includes the actual shipping and disposal of the materials. Each phase of the work is described in detail below.

##### **4.1 Phase I – Preliminary Evaluation and Staging**

SET will utilize a four man crew for an initial one day duration. The crew will be comprised of a Project Manager/Field Chemist, gas cylinder specialist, technician and equipment operator. All personnel will have met and exceeded all EPA, DOT and OSHA applicable training requirements in addition to bringing experience in managing similar projects of this scale. All work will be conducted in a minimum of modified Level D PPE with increases in protection level to be made according to specific activities.

All material management activities including but not limited to: sampling, consolidation, repackaging, drum maintenance, and packaging will occur in temporary handling areas to be made of a base layer of 6-mil polysheeting and anchored/bermed with 50 lb bags of clay absorbent. A quad gas meter will be operational during all of the above activities for purposes of air monitoring. Appropriate spill control measures (liquid absorbent media, overpacks, acid/base neutralizer, and absorbent pads/boom/socks) will be accessible to temporary handling areas. The above provisions will apply to the staging area to be established for materials pending removal on the final pickup day.

SET's Field Chemist and cylinder specialist will segregate containers and cylinders into waste disposal categories depending on chemical compatibility. Field characterization testing will be utilized to determine these categories. Like and similar materials, where practical, depending on container size and physical parameters, will be consolidated into 55-gallon drums. These bulked waste classifications are expected to be: oils, non-regulated liquids, inorganic acid solution, metal fines/shavings, and non-hazardous solids. The drums generated from this procedure will be handled in accordance with their respective pricing as described in our preliminary proposal.

SET's gas cylinder specialist will be dispatched to the site to address the evaluation of the various on-site gas cylinders as described herein. The cylinder specialist will attempt to identify the contents of cylinders based on DOT numbers, labels or any other

markings on cylinders. Once identification is made, the cylinders will be properly labeled and packaged for shipping. If any cylinders are deemed “not shippable”, SET will provide cylinder over packs to properly handle such cylinders. After completing Phase I SET will be able to provide information and pricing on any over packing and sampling of cylinders that need to take place.

#### **4.1.1 Laboratory Testing of Materials**

SET will obtain representative composite sample(s) of all identified unique waste streams. These samples will be submitted for a barrage of analytical procedures as necessary and consistent with the nature of the waste stream in order to identify the baseline physical and chemical characteristics that will dictate certain handling, packaging, transportation and disposal procedures vis a vis RCRA and DOT regulations. It is expected that Phase I activities will yield a minimum of four unique waste streams. The analytical procedures that will be required to complete the characterization of said waste streams are described below.

##### Oil and Water

Analysis for PCBs will be necessary. Specific laboratory analysis for PCBs will be performed to determine the presence of PCBs as well as their concentration in the existing oil and water mixtures. A composite sample to be comprised of a representative aliquot of each individual drum will be obtained. To prevent cross contamination, unique disposable sampling rods and PPE will be used for each drum. The composite sample will be sent to SET’s contracted laboratory for priority PCB testing.

##### Inorganic Aqueous Solution

A single 55-gallon drum that was of a composite package configuration (plastic bladder/inner liner adhered to an outer metal drum) was observed by SET personnel during the initial site visit. This type of packaging, other waste materials onsite, and site history yield a high probability for this drum to contain an inorganic aqueous, probably acidic, metal plating or stripping solution. A representative sample of said drum will be obtained by SET personnel utilizing Level C PPE during Phase I activities. This representative composite sample will be split and submitted to two different laboratories. One sample will be submitted to a an independently owned accredited third party facility contracted by SET in order to be subjected to the toxicity characteristic leachate procedure (TCLP) to obtain the baseline physical/chemical parameters of corrosivity, reactivity, and toxicity (CRT) and numerical data on the eight RCRA regulated metals. The other sample will be submitted to SET’s own internal laboratory for purposes of unknown identification analysis. Through a combination of wet chemistry and instrumental analytical techniques - a qualitative profile of the constituents comprising the sample will be revealed. Combination of the two analytical results will allow for

accurate waste stream characterization and profiling for disposal purposes compliant with regulatory requirements.

#### *Metal Fines and Shavings*

Initial site activities conducted by third parties in addition to a walkthrough performed by SET personnel indicate that probability of this particular waste stream existing and comprised primarily of magnesium turnings. Again, and as narrated above, nature of the site, past use, waste material generated, etc. necessitate that the composite representative sample obtained for this waste stream be submitted to external third party laboratory for determination of status of the TCLP RCRA 8 metals. The split of the sample will be submitted to SET's internal laboratory for unknown identification analysis. This will confirm the physical matrix of magnesium and/or reveal any other constituents comprising the representative sample.

#### *Non-hazardous Solids and Debris*

This category is expected to constitute the majority of all waste materials to be removed from the site. As described above a continuous composite sample will be organically maintained throughout Phase I activities. Final representative composite sample will be split and the respective splits handled as described under "Metal Fines and Shavings".

#### *Miscellaneous*

Two unique and independent "unknown identification analyses" are also anticipated within the scope of work. As the current staging of materials does not allow for access to all drums and containers that comprise the scope of work, there remains the possibility that certain drums may be revealed during Phase I activities to contain materials that are not compatible for inclusion in any of the waste streams described above. Should it be necessary, individual representative samples of qualify material(s) will be obtained and submitted to SET's internal laboratory for unknown identification analysis as discussed earlier in the body of this document. While this contingency is not expected to be utilized, experience with past Phase I events and in consideration of the large amount of materials that will only be made accessible with the commencement of Phase I activities, a contingency for two unknown identification analyses is incorporated into this Work Plan.

## **4.2 Phase II – Transportation and Disposal of Materials**

Subsequent to the initial one day Phase I period will be a two day onsite waste management and removal phase will occur. During this time period; all containerized wastes will be removed from the site after any necessary repackaging/container



consolidation has been completed. This phase will occur after completion of necessary laboratory analysis, all materials have been profiled and approved for receipt at their respective designated Treatment, Storage or Disposal Facility (TSDF), and SET has reviewed and obtained signature on all necessary shipping documents. This phase will occur from one to three weeks from completion of the initial site activities. SET will utilize a crew as described in Phase I (including our original Project Manager) with the addition of a driver and an 88-drum permitted trailer from its Transportation Department.

The following is a brief description of the proposed waste management activities with regard to some of the specific category(s) of materials identified on-site.

#### **4.2.1 Gas Cylinders**

The gas cylinders will be transported for delivery to SET's disposal facility in Houston, Texas. The cylinders will be disposed of properly and a letter of certification will be made available after SET processes the cylinders. A facility site profile and compliance documentation for SET's Houston gas cylinder disposal facility is provided in Appendix C.

#### **4.2.2 Oil and Water Drums**

It is anticipated that three 55-gallon drums of an "oil and water" composition will be identified on-site as drummed waste requiring disposal. Should there be a positive analytical result for PCBs, samples of the individual drums of the compromised composite sample will be submitted for PCB testing in order to isolate the source drum(s) contributing to the PCB contamination. Disposal methods will depend upon the results of the PCB analytical results.

#### **4.2.3 Special Waste Solids/Non-Hazardous Waste Solids and Cylinders**

It is anticipated that approximately fifty 55-gallon drums of material will be generated in this category. The following materials will be included, but not limited to, placement in this category: crushed empty drums, empty containers, oil filter/debris, garbage/debris, cement, silica sand, absorbent pads, metal parts/slag/debris, ice melt, drierite, refractory cement (asbestos free). A representative sample will be maintained during the generation of the category and will be submitted for characterizing analysis upon completion of initial site activities. Results of this analysis and record of materials placed into this category will be used to profile this waste stream into a local permitted Subtitle D landfill. The drums will be picked up and delivered to said facility on final pickup day.

Terracon will provide a qualified environmental professional on-site during the remedial activity to provide oversight. The environmental professional will document the field

activity and obtain copies of the laboratory analytical reports, waste disposal manifests, and certificates of destruction to properly document the completion of the work. The environmental professional will be responsible for notifying the USEPA contact in advance of all scheduled on-site work.

#### **4.3 Implementation Schedule**

The implementation of the removal actions will be initiated following notification of USEPA approval of this plan. The implementation plan and sequence is summarized below:

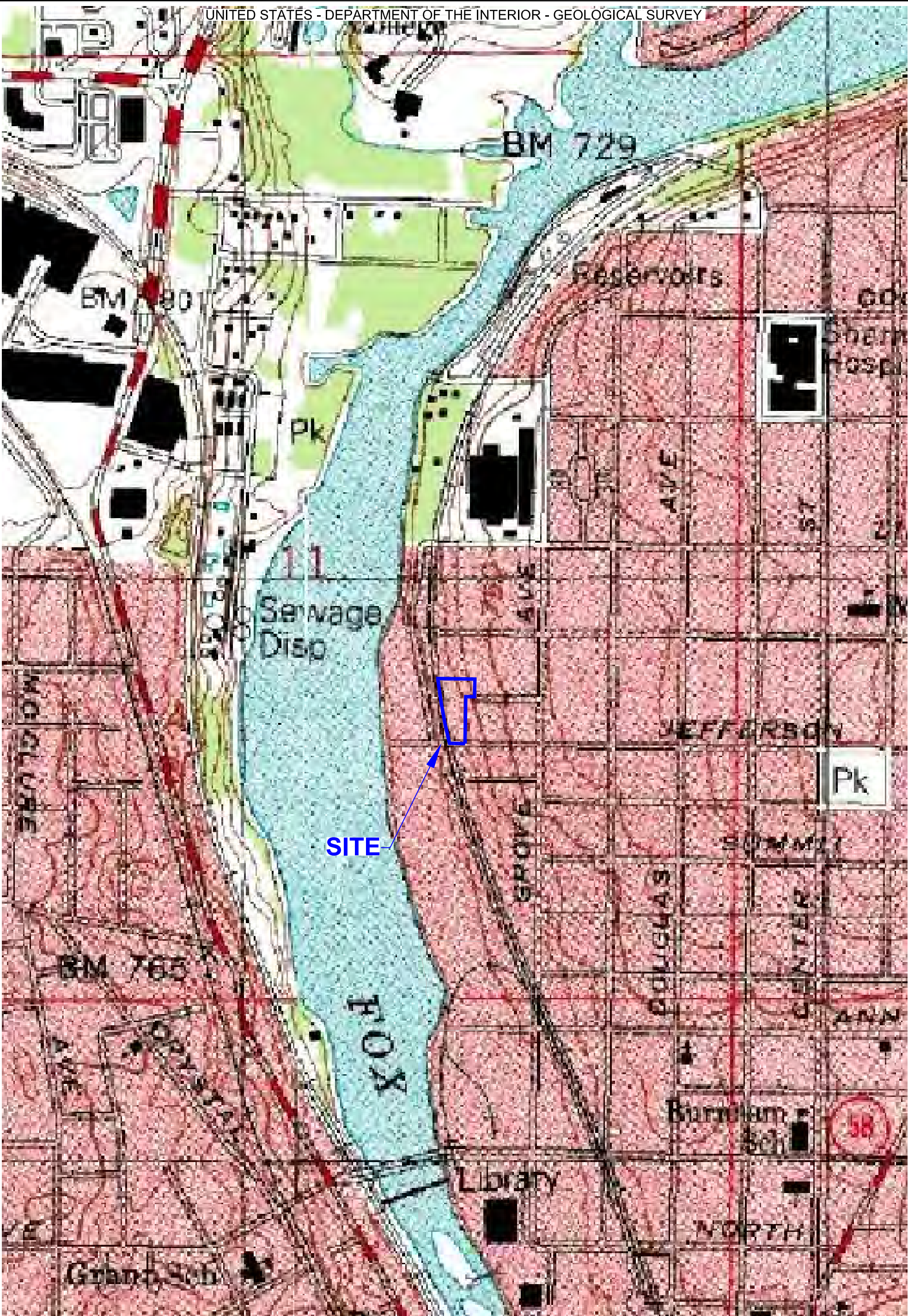
- Preparation of Health and Safety Plans – Submit within seven days after notice to proceed.
- Phase I – The remediation/disposal contractor will initiate and complete Phase I within two weeks following approval to proceed.
- Phase II – The on-site work will be initiated approximately one to three weeks after completion of Phase I. On-site work will require approximately two days.
- Removal Action Completion Report – The Environmental Consultant will compile and prepare the completion report within 60 days of disposal of the materials.

## **5.0 REPORTING**

As the conclusion of the removal action, a report will be prepared and submitted to USEPA. The Removal Action Completion Report will include a narrative of the process used to address the drummed materials and gas cylinders, document the material quantities transported and disposed off-site, and summarize the analytical data obtained during the evaluation process.

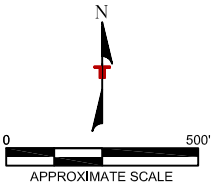
The report will also be submitted to IEPA as part of the SRP reporting process.

## FIGURES



Source: USGS TERRASERVER-USA.COM - Topographic Image, Dated 1991

----- Approximate Site Location



Project Mngr:	MRW	Project No.	11077052
Drawn By:	DAC	Scale:	AS-SHOWN
Checked By:	MRW	Revised By:	~
Approved By:	MRW	Date:	May 7, 2009



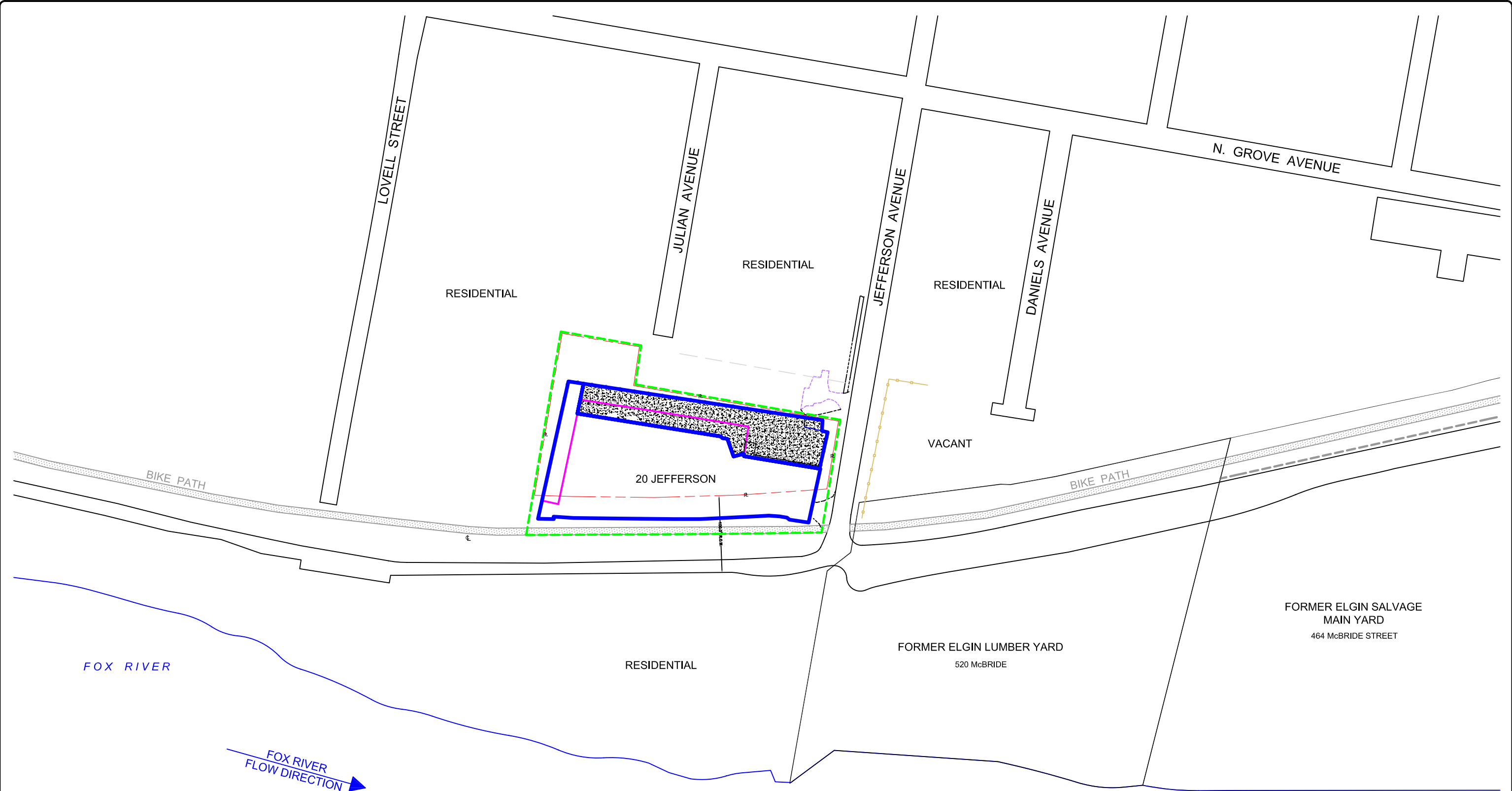
Consulting Engineers and Scientists

135 AMBASSADOR DRIVE  
PH. (630) 717-4263


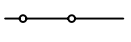


NAPERVILLE, ILLINOIS 60540  
FAX. (630) 357-9489

TOPOGRAPHIC VICINITY MAP
ELGIN SALVAGE YARD - JEFFERSON SITE 20 JEFFERSON STREET ELGIN, ILLINOIS

FIG. No.
1



**LEGEND**

-  CONCRETE PAD
-  FENCE
-  SITE REMEDIATION BOUNDARY
-  PROPERTY BOUNDARY

**NOTES:**  
See ALTA / ACSM LAND TITLE SURVEY  
(02-16-2004) for additional site details.

**Approximate Scale (Feet)**

0 120

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES  
N:\PROJECTS\2007\11077052\drawings\11077052 - 20 JEFFERSON - REV 20090507a.dwg

SURROUNDING LAND USE MAP ELGIN SALVAGE REDEVELOPMENT SITE JEFFERSON AVENUE PARCEL ELGIN, ILLINOIS			
Project Mngr:	JMN	 135 Ambassador Drive Naperville, Illinois 60540	Project No. 44037069
Designed By:	PDW		Scale: AS SHOWN
Drawn By:	SLM		File No. 44037069-4
Checked By:	PDW		Date: 5/7/2009
Approved By:	JMN		Figure No. 2



## **APPENDIX A**

**SRP Form DRM-2**

**Site Remediation Program Form (DRM-2)**  
**(To Be Submitted with all Plans and Reports)**

**I. Site Identification:**

Site Name: <u>Elgin Salvage and Supply - Jefferson Stie</u>			
Street Address: <u>20 Jefferson Avenue</u>		P.O. Box: _____	
City: <u>Elgin</u>	State: <u>IL</u>	Zip: <u>60120</u>	Phone: <u>847 931 6749</u>
Illinois Inventory I. D. Number: _____		IEMA Incident Number: _____	

**II. Remediation Applicant:**

Applicant's Name: <u>Raymond H. Moller</u>		Company: <u>City of Elgin</u>	
Street Address: <u>150 Dexter Court</u>		P.O. Box: _____	
City: <u>Elgin</u>	State: <u>IL</u>	ZIP Code: <u>60120</u>	Phone: <u>847 931 6749</u>

I hereby request that the Illinois EPA review and evaluate the attached project documents in accordance with the terms and conditions of the Environmental Protection Act (415 ILCS 5), implementing regulations, and the review and evaluation services agreement.

Remediation Applicant's Signature: *Raymond H Moller* Date: 5-8-09

**III. Contact Person:**

Contact's Name: <u>John M. Nardozi, P.E.</u>	Contact's Name: _____
Company: <u>Terracon Consultants, Inc.</u>	Company: _____
Street Address: <u>135 Ambassador Drive</u>	Street Address: _____
P.O. Box: _____	P.O. Box: _____
City: <u>Naperville</u> State: <u>IL</u> ZIP Code: <u>60540</u>	City: _____ State: _____ ZIP Code: _____
Phone: <u>630 717 4263</u>	Phone: _____

**IV. Review & Evaluation Licensed Professional Engineer or Geologist ("RELPEG"), if applicable:**

RELPEG's Name: _____	Company: _____
Street Address: _____	P.O. Box: _____
City: _____ State: _____ ZIP Code: _____	Phone: _____
Registration Number: _____	License Expiration Date: _____

All information submitted is available to the public except when specifically designated by the Remediation Applicant to be treated confidentially as a trade secret or secret process in accordance with the Illinois Compiled Statutes, Section 7(a) of the Environmental Protection Act, applicable Rules and Regulations of the Illinois Pollution Control Board and applicable Illinois EPA rules and guidelines. The Illinois EPA is authorized to require this information under Sections 415 ILCS 5/58 - 58.12 of the Environmental Protection Act and regulations promulgated thereunder. Disclosure of this information is required as a condition of participation in the Site Remediation Program. Failure to do so may prevent this form from being processed and could result in your plan(s) or report(s) being rejected. This form has been approved by the Forms Management Center.

## V. Project Documents Being Submitted:

Document Title: <u>Removal Action Work Plan</u>	Date of Preparation of Plan or Report: <u>May 8, 2009</u>
Prepared by: <u>Terracon Consultants, Inc.</u>	Prepared for: <u>City of Elgin</u>
Type of Document Submitted:	
<input type="checkbox"/> Site Investigation Report - Comprehensive	<input type="checkbox"/> Sampling Plan
<input type="checkbox"/> Site Investigation Report - Focused	<input type="checkbox"/> Health and Safety Plan
<input type="checkbox"/> Remediation Objectives Report-Tier 1or 2	<input type="checkbox"/> Community Relations Plan
<input type="checkbox"/> Remediation Objectives Report-Tier 3	<input type="checkbox"/> Risk Assessment
<input type="checkbox"/> Remedial Action Plan	<input type="checkbox"/> Contaminant Fate & Transport Modeling
<input type="checkbox"/> Remedial Action Completion Report	<input checked="" type="checkbox"/> Other: <u>Work Plan for Removal of Drums and Cylinders</u>

Document Title: _____	Date of Preparation of Plan or Report: _____
Prepared by: _____	Prepared for: _____
Type of Document Submitted:	
<input type="checkbox"/> Site Investigation Report - Comprehensive	<input type="checkbox"/> Sampling Plan
<input type="checkbox"/> Site Investigation Report - Focused	<input type="checkbox"/> Health and Safety Plan
<input type="checkbox"/> Remediation Objectives Report-Tier 1or 2	<input type="checkbox"/> Community Relations Plan
<input type="checkbox"/> Remediation Objectives Report-Tier 3	<input type="checkbox"/> Risk Assessment
<input type="checkbox"/> Remedial Action Plan	<input type="checkbox"/> Contaminant Fate & Transport Modeling
<input type="checkbox"/> Remedial Action Completion Report	<input type="checkbox"/> Other: _____

## VI. Professional Engineer's or Geologist's Seal or Stamp:

I attest that all site investigations or remedial activities that are the subject of this plan(s) or report(s) were performed under my direction, and this document and all attachments were prepared under my direction or reviewed by me, and to the best of my knowledge and belief, the work described in the plan and report has been designed or completed in accordance with the Illinois Environmental Protection Act (415 ILCS 5), 35 Ill. Adm. Code 740, and generally accepted engineering practices or principles of professional geology, and the information presented is accurate and complete.

Engineer or Geologist Name: John M. Nardozzi, P.E.

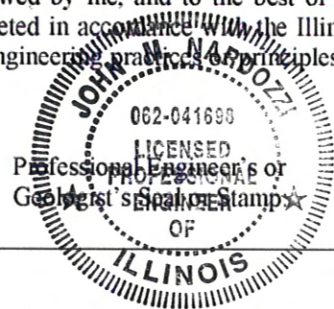
Company: Terracon Consultants, Inc.

Phone: 630 717 4263

Registration Number: 062-041698

Signature: *John M. Nardozzi*

License Expiration Date: 11-30-2009



Note: The authority of a Licensed Professional Geologist to certify documents submitted to the Illinois Environmental Protection Agency for review and evaluation pursuant to Title XVII of the Environmental Protection Act is limited to Site Investigation Reports (415 ILCS 58.7(f), as amended by P.A. 92-0735, effective July 25, 2002). A Licensed Professional Geologist cannot certify Remediation Objectives Reports, Remedial Action Plans or Remedial Action Completion Reports.

## **APPENDIX B**

### **Analytical Summary Tables for Drummed Materials**

**Table 1**  
**Analytical Results for PCBs**  
**Elgin Salvage Site**  
**Elgin, Illinois**

Parameter	Field Sample ID	ES-DRUM-01-042408	ES-DRUM-02-042408	ES-DRUM-03-042408	ES-DRUM-04-042408	ES-S01(0-4')-042408
	Sample Date	4/24/2008	4/24/2008	4/24/2008	4/24/2008	4/24/2008
	Matrix	Solid	Solid	Solid	Solid	Soil
	Depth	NA	NA	NA	NA	0 - 4'
Parameter	Result Units					
Aroclor 1016	ug/kg	< 33	< 33	< 33	< 33	< 180
Aroclor 1221	ug/kg	< 67	< 67	< 67	< 67	< 360
Aroclor 1232	ug/kg	< 33	< 33	< 33	< 33	< 180
Aroclor 1242	ug/kg	< 33	< 33	< 33	< 33	< 180
Aroclor 1248	ug/kg	< 33	68	97	< 33	< 180
Aroclor 1254	ug/kg	< 33	< 33	< 33	< 33	800
Aroclor 1260	ug/kg	< 33	< 33	< 33	< 33	< 180
Total PCBs	ug/kg	ND	68	97	ND	800

**Notes:**

Shaded results exceed the cleanup criterion of 10 parts per million.

ID = Identification

NA = Not applicable

ND = Not detected above the reporting limit

PCB = Polychlorinated biphenyl

ug/kg = Microgram per kilogram



**Table 2**  
**Analytical Results for Metals**  
**Elgin Salvage Site**  
**Elgin, Illinois**

Parameter	Field Sample ID	ES-DRUM-01- 042408	ES-DRUM-02- 042408	ES-DRUM-03- 042408	ES-DRUM-04- 042408	ES-S01(0-4')- 042408
	Sample Date	4/24/2008	4/24/2008	4/24/2008	4/24/2008	4/24/2008
	Matrix	Solid	Solid	Solid	Solid	Soil
	Depth	NA	NA	NA	NA	0 - 4'
Result Units						
Total Metals						
Arsenic	mg/kg	< 1	2.12	< 10	< 1	2.4
Barium	mg/kg	49.9	5.36	49.1	4.9	38.3
Cadmium	mg/kg	1.5	0.553	< 5	< 0.5	< 0.541
Chromium	mg/kg	508	64.9	619	538	17
Lead	mg/kg	7.35	105	55.8	23.8	30.1
Mercury	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	1.63
Selenium	mg/kg	< 1	1.01	< 10	< 1	< 1.08
Silver	mg/kg	< 2	1.48	< 10	< 1	< 1.08
TCLP Metals						
Arsenic, TCLP	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium, TCLP	mg/L	< 1	< 1	< 1	< 1	< 1
Cadmium, TCLP	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chromium, TCLP	mg/L	< 0.1	< 0.1	0.146	0.154	< 0.1
Lead, TCLP	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Mercury, TCLP	mg/L	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
Selenium, TCLP	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Silver, TCLP	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

**Notes:**

Shaded results exceed (1) cleanup criterion of 400 mg/kg lead or (2) toxicity characteristic in Title 40 of the Code of Federal Regulations, Part 261.24.

ID = Identification

mg/kg = Milligram per kilogram

mg/L = Milligram per liter

NA = Not applicable

TCLP = Toxicity Characteristic Leaching Procedure



**Table 3**  
**Analytical Results for Dioxins and Furans**  
**Elgin Salvage Site**  
**Elgin, Illinois**

	Field Sample ID	ES-Drum-01-042408	ES-Drum-02-042408	ES-Drum-03-042408	ES-Drum-04-042408
	Sample Date	4/24/2008	4/24/2008	4/24/2008	4/24/2008
	Matrix	Solid	Solid	Solid	Solid
	Depth	NA	NA	NA	NA
Parameter	Units				
1,2,3,4,6,7,8-HpCDD	ng/kg	2 J	86.7	21.8	4.54 J
1,2,3,4,6,7,8-HpCDF	ng/kg	3.15 J	67.5	29.7	3.06 J
1,2,3,4,7,8,9-HpCDF	ng/kg	0.461 BJ	17.4 B	5.47 B	0.461 BJ
1,2,3,4,7,8-HxCDD	ng/kg	< 0.053	0.955 J	0.741 J	< 0.0849
1,2,3,4,7,8-HxCDF	ng/kg	1.46 J	24.7	13.6	1.13 J
1,2,3,6,7,8-HxCDD	ng/kg	0.248 J	28.6	1.83 J	0.324 JK
1,2,3,6,7,8-HxCDF	ng/kg	0.69 J	9.28	5.07	0.456 J
1,2,3,7,8,9-HxCDD	ng/kg	0.222 JK	12.2	1.9 J	0.414 J
1,2,3,7,8,9-HxCDF	ng/kg	< 0.0588	1.31 J	0.508 J	< 0.0949
1,2,3,7,8-PeCDD	ng/kg	< 0.103	1.05 J	0.685 J	< 0.0869
1,2,3,7,8-PeCDF	ng/kg	0.518 J	7.73	4.38 J	0.491 J
2,3,4,6,7,8-HxCDF	ng/kg	0.726 J	9.19	4.86 J	0.495 J
2,3,4,7,8-PeCDF	ng/kg	0.607 J	4.35 J	3.77 J	0.399 J
2,3,7,8-TCDD	ng/kg	< 0.114	< 0.113	< 0.0743	< 0.104
2,3,7,8-TCDF	ng/kg	0.768 J	4.72	3.17	0.583 J
OCDD	ng/kg	9.78 BJ	241 B	110 B	28.5 B
OCDF	ng/kg	3.14 J	156	49.2	3.76 J
Total Hepta-Dioxins	ng/kg	3.86 J	155	40.8	9.35
Total Hepta-Furans	ng/kg	4.48 J	121	49.4	4.89 J
Total Hexa-Dioxins	ng/kg	0.915 J	170	14.9	2.64 J
Total Hexa-Furans	ng/kg	5.49	86.2	48	4.14 J
Total Penta-Dioxins	ng/kg	0.454 J	7.41	3.66 J	0.309 J
Total Penta-Furans	ng/kg	5.73	55.1	43.6	4.15 J
Total Tetra-Dioxins	ng/kg	< 0.114	1.99	0.608 J	< 0.104
Total Tetra-Furans	ng/kg	4.46	39.4	40.9	1.06 J
Total TEQ	ng/kg	0.669	13.5	5.73	0.565

**Notes:**

Shaded results exceed the cleanup criterion of 1,000 ng/kg total TEQ.

B = The analyte was found in the associated method blank.

E = Indicates an estimated value – used when the analyte concentration exceeds the upper end of the linear calibration range

ID = Identification

J = Indicates an estimated value – result was detected below reporting limit but above the method detection limit

K = Result is the estimated maximum possible concentration, which is calculated when the ion abundance ratios are outside the quality control limits

NA = Not applicable

ng/kg = Nanogram per kilogram

TEQ = Toxic equivalent to 2,3,7,8-TCDD

## **APPENDIX C**

### **SET Environmental, Inc. Houston Facility Site Profile<sup>6</sup>**

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<sup>6</sup> Selected Exhibits to the Facility Site Profile are omitted for brevity; these items can be provided upon request.

**SET ENVIRONMENTAL, INC.**

*HOUSTON FACILITY  
SITE PROFILE*

# SET ENVIRONMENTAL, INC. SITE PROFILE

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Revised – January 2009

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Waste Treatment Information .....	9
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## EXHIBITS

- A. Facility Map
- B. Certificate of Insurance
- C. Part B Permit
- D. Safety Equipment
- E. Most Recent Agency Inspection Correspondence
- F. Organizational Structure
- G. Training Program
- H. Waste Profile Forms
- I. Notification for Waste Restricted from Land Disposal (LDR)
- J. Waste Scheduling Notification Form

# SET ENVIRONMENTAL, INC.

## SITE PROFILE

### I. GENERAL INFORMATION

*NAME:* SET Environmental, Inc.

*MAILING ADDRESS:* 5738 Cheswood  
Houston, Texas 77087

*FACILITY ADDRESS:* 5743 Cheswood  
Houston, Texas 77087

*TELEPHONE:* (800) 598-7328 or (713) 645-8710

*FAX:* (713) 649-1027

*CONTACTS:* Dave DeVries  
President

Fred Schwartz  
General Manager

Walter (Chuck) Kilgus  
Facility Manager

Scott Skoog  
Facility Engineer

Daniel A. Didier  
Compliance Director

Pamela Page Nowlin  
General Manager-Houston Field Svcs/Sales Manager

*OFFICE HOURS:* 8:00 a.m. to 5:00 p.m. (Weekdays)

*RECEIVING HOURS:* 8:00 a.m. to 4:00 p.m. (Weekdays)

## **II. SITE DESCRIPTION**

### ***LAYOUT***

The facility is situated on a one (1) acre site and has three (3) permitted storage buildings (a map of the facility is included as Exhibit A):

1. Warehouse - used for various types of hazardous waste storage, drum cleaning, waste compaction and metal drum compaction. This storage building has a concrete base that is coated with an epoxy sealant. In order to prevent run-on, run-off and accumulation of rainwater this building is roofed, has walls and is surrounded by a six-inch high concrete curb. Six-inch high concrete curbs separate incompatible material. Each separate storage area has the capacity to contain a minimum of 10% of the volume of waste stored in that area and 100% of the largest container in that area.
2. Process Building - used for chemical treatment, compressed gas and lab pack processing. This storage building also has a concrete base, is roofed and has walls. A six-inch high concrete secondary containment curb also surrounds this building. This building houses two permitted container storage units (CS-1 and CS-3) and four chemical treatment tanks that will be described later (PT-2, PT-5, PT-11 and WW-2).
3. Ignitable Storage and Processing Building - used for the storage of flammable wastes in containers and during 2009 will be redesigned to process lab pack material. This container storage area has a concrete base, is roofed and enclosed on three sides. The container storage area is sloped to a low point in the center of the building and has the capacity to contain a minimum of 10% of all waste and 100% of the largest container stored in this area. This building is divided into three separate permitted storage units (CS-4, CS-5 and CS-6) with a fourth to be permitted in 2009. Prior to 2009 this building housed 4 fuel blending tanks that have recently been closed and removed.

### ***LOCATION***

The facility is located outside the 100-year flood plain. The surrounding area within one mile of the facility is classified as mixed commercial, residential and industrial. The nearest home is 1,100 feet north, the nearest school is 3,500 feet southeast and the nearest surface water (Sims Bayou) is 7,250 feet southeast of the facility. There are no down gradient drinking water wells within one (1) mile.

### ***SECURITY***

A six (6) foot high chain link fence topped with three (3) strands of barbed wire encloses the entire facility. Gates that are locked when facility personnel are not present control the entrances to the facility. On-site security personnel patrol the facility during non-operational hours. As required by 40 CFR 264.24, signs that state "Danger - Authorized Personnel Only" are posted on the perimeter of the site. These signs are posted in English and are visible from at least 25 feet.



## ***FACILITY HISTORY***

SET Environmental, Inc. was incorporated in the State of Illinois on April 4, 1979 and purchased the facility from Nuclear Sources and Services Inc. (NSSI) on April 8, 1988. At the time of purchase, the facility was under interim status and had been operated by NSSI since 1985.

The site was used for agricultural purposes up to 1930. Between 1930 and 1981 the property was privately owned. During this time no entities were identified that would suggest any on site industrial or commercial activities. Aerial photographs taken in 1969 and 1975 show the property to be vacant. Nuclear Sources and Services, Inc. (NSSI) purchased the property in 1981. NSSI began construction of the existing facility in 1985 for the purpose of hazardous waste treatment and storage.

Prior to purchasing the facility, SET Environmental hired an independent engineering and consulting firm to conduct a pre acquisition environmental risk assessment of the property. The assessment included sampling of soil and groundwater. There were no signs of contamination observed in the groundwater; however, low concentrations (highest level = 3.1 ppm) of PCBs were detected in the upper foot of soil at the southern most end of the facility. Soil core analysis at two and three foot depth did not show any contamination. The soil showing low concentrations of PCB's in the upper foot was excavated and disposed of in April of 1988.

SET Environmental, Inc. was issued a Part B Permit on October 4, 1990 from the Texas Natural Resource Conservation Commission and December 14, 1990 from the United States Environmental Protection Agency. SET Environmental's RCRA permit was renewed on August 12, 2002 and will expire on August 12, 2012. The facility name was changed from Treatment One, Division of SET Environmental to SET Environmental, Inc. in March of 2002 to better convey the comprehensive services offered by the company.

## **III. FINANCIAL INFORMATION**

<i>CORPORATE OFFICE:</i>	SET Environmental, Inc. 450 Sumac Road Wheeling, Illinois 60090 (800) 634-6856 or (847) 537-9221
<i>FORM OF OWNERSHIP:</i>	Private Corporation
<i>COMPANY OFFICERS:</i>	Calvin Tameling, CEO Bernard Tameling, Secretary/Treasurer
<i>DUN &amp; BRADSTREET NO:</i>	09-897-9297
<i>CLOSURE PLAN MECHANISM:</i>	Trust Fund (fully funded)
<i>CLOSURE COST ESTIMATE:</i>	\$544,761 (Last Update: December 2008)
<i>INSURANCE CERTIFICATE:</i>	See Exhibit B
<i>NUMBER OF EMPLOYEES:</i>	Approximately 215 (Total), 45 (Houston Facility)

#### **IV. REGULATORY INFORMATION**

*USEPA ID NO:* TXD055135388

*STATE REGISTRATION NO:* 50267

*PART B PERMIT NO:* HW-50267-001 (See Exhibit C)

*SIC CODE:* 4953 Refuse Systems  
4953-01 Hazardous Waste Collection and Distribution

*NAICS CODE:* 562211

*REGULATORY STATUS:* SET - Houston is currently under no enforcement action by any regulatory body.

*PERMIT WRITER:* Texas Commission on Environmental Quality  
Vaishali Tendolkar, MC130  
Texas Commission on Environmental Quality  
Waste Permits Division  
Industrial and Hazardous Wastes Permits Section  
P.O. Box 13087  
Austin, TX 78711-3087

*INSPECTION OFFICIAL:* Texas Commission on Environmental Quality, Region 12  
5425 Polk Avenue, Suite H  
Houston, Texas 77023  
Ms. Barbara Johnston (713) 767-3600

#### **V. ADMINISTRATIVE INFORMATION**

##### *BACKGROUND OF KEY PERSONNEL:*

Dave DeVries, President, B.S. Business Administration  
1997 - Present – SET Environmental, Inc.  
1994 - 1997 - General Manager; Treatment One  
1991 - 1994 - General Manager; SET Environmental, Inc.- Remediation Division  
1986 - 1991 - Various Positions; SET Environmental, Inc.

Frederick J. (Fred) Schwartz, General Manager, M.B.A. Marketing and Computer Systems,  
B.S. Chemical Engineering  
1999 - Present – SET Environmental, Inc.  
1995 - 1999 - Concept Chemicals, Inc. General Manager  
1987 - 1985 - RUST Remedial Services, Inc. (Formerly Chemical Waste Mgmt., Remedial Services), Group Manager  
1983 - 1987 - Rollins Field Services, Inc., Business and Marketing Manager

Corwin Johnson, Approvals Manager, B.S. Biology, Minor Chemistry  
 1998 - Present – SET Environmental, Inc.  
 1995 - 1998 - Operations Manager; Treatment One  
 1989 - 1995 - Environmental Field Services Manager; Treatment One

Bob Mann, Facility Chemist, M.S. Chemistry  
 1989 - Present – SET Environmental, Inc.  
 1987 - 1989 - ENSCO; Chief Chemist

Scott Skoog, Facility Engineer, B.S. Chemical Engineering, PE  
 1995 – Present – SET Environmental, Inc.  
 1993 - 1995 – Operations Manager, Treatment One  
 1985 - 1993 - SET Environmental, Inc; Permitting

Daniel A. Didier, Compliance Director, B.S. Forestry, M.S. Candidate Environmental Science,  
 Specialization Industrial Hygiene, Certified Hazardous Materials Manager, 1993  
 1988 - Present – SET Environmental, Inc.  
 1986 - 1988 - SET Environmental, Inc; Project Manager

Walter (Chuck) Kilgus, Facility Manager, B.S. Biology, Minor Chemistry  
 1998 – Present – SET Environmental, Inc.  
 1995 - 1998 – Environmental Field Services Manager, Treatment One  
 1991 - 1995 - Lab Pack Approvals Coordinator; Treatment One

Pamela Page Nowlin, General Manager-Houston Field Svc/Sales Manager  
 1996 - Present – SET Environmental, Inc.  
 1992 - 1996 - Shipping, Receiving & Inventory/Administration Manager  
 1991 - 1992 - Canonic Environmental; Business Development Manager  
 1990 - 1991 - MSP Technical Service; District Account Manager  
 1986 - 1990 - Chemical Waste Management; Customer Service

*BREAKDOWN OF EMPLOYEES BY DEPARTMENT:*

Sales (off site) .....	4
Customer Service (off-site) .....	4
Waste Approvals.....	2
Data Control .....	1
Billing .....	1
Laboratory .....	2
Drum Processing.....	11
Lab Pack Processing.....	5
Shipping and Receiving .....	6
Cylinder Management .....	9
Maintenance .....	4
Compliance and Safety.....	1
Administration/Other.....	2

## VI. WASTE PROCESSING SYSTEMS

**CHEMICAL TREATMENT:** There are four tanks that make up the chemical treatment system. The tanks: identification numbers are PT-2, PT-5, PT-11 and WW-2; permit numbers are 8, 14, 9, and 15 and capacities are 1,700, 7,000, 1,615, and 6,500 gallons respectively.

All four tanks and associated ancillary equipment are:

- (1) Above ground;
- (2) Equipped with sealed secondary containment capable of containing the contents of the largest tank;
- (3) Equipped with agitators;
- (4) Inspected every three (3) years for integrity by an independent registered professional engineer, and are;
- (5) Inspected each workday by qualified facility personnel. The purpose of this inspection is to identify any leaks, corrosion or other system failure in the tanks, ancillary equipment and secondary containment.

PT-2 and PT-11 tanks and ancillary equipment are:

- (1) Equipped with corrosion protection (Kynar liners);
- (2) Equipped with agitators, pH, temperature and oxidation potential monitors;
- (3) Connected to an air emissions control system that is composed of a recirculating caustic counter current packed scrubber in line with an 8000-pound activated carbon bed;

The treatment processes designated for each tank are as follows: PT-2 is used for neutralization and hydrolysis, PT-5 is used for caustic solution storage, WW-2 is treated waste water storage and PT-11 is used primarily for hydrolysis of water reactive acids and neutralization of liquids and gases.

**GAS CYLINDER PROCESSING:** SET Environmental, Inc. has a variety of scrubbing techniques used for the treatment and disposal and recycling of compressed gases. All processing activities take place under emission-controlled atmosphere. The use of PT-11 (Chemical Treatment Unit) allows for remote handling of the gas cylinders. The flow of gases through the scrubbing systems is controlled from outside the treatment building, thereby eliminating potential exposure to the gases.

Several portable processing units are used for the treatment of compressed gases. Each primary treatment unit is equipped with a back-up unit of equal capacity. These portable processing units are connected to an air emissions control system consisting of a caustic scrubber to remove acidic fugitive emissions and venturi scrubber to remove particulates.

Two large enclosures, maintained under negative pressure are utilized while connecting compressed gas cylinders to manifold systems. One enclosure is connected to a caustic scrubber and the other is connected to 2-6000 pound activated carbon beds. Each system is designed to prevent employee exposure and capture any potential fugitive emissions.

In addition to processing compressed gases, SET Environmental, Inc. has the capability to overpack or repack cylinders in poor condition and to process cylinders with inoperable valves.

## **VII. EMISSIONS CONTROL SYSTEMS**

*ACTIVATED CARBON BEDS:* Three separate activated carbon beds are utilized throughout the facility. The following chemical processing areas have emissions controlled with activated carbon.

1. Lab Pack Processing Unit
2. Two chemical treatment tanks (PT2 and PT11)
3. Portable Gas Cylinder Processing Units

*CAUSTIC SCRUBBERS:* The facility has three caustic scrubbing units. Two are vertical, counter current, recirculating, packed towers. The third unit is a horizontal, caustic bath scrubber.

The following areas have emissions controlled with caustic scrubbers.

1. Chemical Treatment Tanks (PT2 and PT11)
2. Gas Cylinder Processing Units and Enclosures
3. Lab Pack Consolidation Enclosure

*PARTICULATE SCRUBBERS:* The facility utilizes a reverse pulse, high efficiency particulate filtration system (HEPA) to collect silica generated during the treatment of hydride gases. Connected to one of the caustic scrubbers is a venture particulate scrubber to capture fine particulates generated from the treatment of acidic gases.

## **VIII. WASTE TREATMENT INFORMATION**

*WASTE MANAGEMENT METHODS:* Neutralization, Oxidation/Reduction, Hydrolysis, Repackaging, and Storage.

*PACKAGING REQUIREMENTS:* SET Environmental, Inc. will only accept DOT authorized packagings for shipments of hazardous materials; non-hazardous materials may be shipped in non-DOT packagings. SET Environmental, Inc. Lab Pack Protocol is available upon request.

*UNACCEPTABLE MATERIAL:* TSCA regulated PCBs, Radioactive Material, Explosives, Infectious Wastes and Dioxins.

*EMPTY DRUM HANDLING:* All drums are power washed and are either reused by SET Environmental, Inc. or are rendered unusable. Metals drums are crushed and sent off-site for scrap metal recycling. Poly drums are cut up and shipped off-site for land disposal.

## **IX. SAFETY AND TRAINING**

**TRAINING:** SET Environmental, Inc. has developed a comprehensive training program structured into five areas: Administrative, Safety, Regulatory, Technical and Operational. Initial training includes 40 hours of classroom instruction. Each facility employee is certified by the American Red Cross in CPR/Standard First Aid. Continuing education includes a minimum of eight hours annual review complimented with monthly safety meetings.

**MEDICAL MONITORING:** SET Environmental, Inc.'s medical surveillance program includes a pre-employment and an annual physical examination as well as an examination upon any suspected exposure and upon termination of employment. A physician experienced in industrial medicine monitors medical surveillance results.

**SAFETY EQUIPMENT:** The facility is equipped with an intercom system capable of providing immediate emergency instructions to facility personnel. There are several phones on site that can be used to summon emergency assistance. Emergency response and first aid stations are located near each processing area. See Exhibit D for description emergency response equipment. Each building is equipped with an automatic fire suppression system. The system activates when thermal detectors are exposed to a temperature of 190°F or a temperature rise of 15° F in one minute or less. Once activated, an alarm sounds to evacuate employees and a monitoring service contacts the Fire Department. SET has recently installed a general alarm system to aid in evacuation of the facility. Activators are located in all facility exit routes.

## **X. LABORATORY INFORMATION**

**PERSONNEL:** Experienced, degreed chemists staff SET ENVIRONMENTAL, INC.'s laboratory. SET's laboratory staff in Wheeling, Illinois provides additional laboratory and analytical support.

**EQUIPMENT:** The Houston lab is equipped with a flashpoint tester, a bomb calorimeter, halogen analyzers, muffle furnace, pH meter, Karl Fischer titration unit, hydrometer, FTIR, and centrifuge. The Wheeling lab is equipped with an infrared spectrophotometer and gas chromatograph, mass spectrophotometer.

**WASTE ANALYSIS:** A minimum of ten percent of the containers are sampled for each wastestream in a each shipment although SET Environmental, Inc. typically takes a composite sample of 100 percent of the containers. The sample is then analyzed to verify that wastes received are those described on the wastestream profile. Depending on the type of waste, analysis may include: % water, flashpoint, pH, BTU, %halides, specific gravity, reactive sulfide, reactive cyanide, suspended solids, dissolved solids, %ash, qualitative test for peroxides and oxidizer characteristics. Lab packs are unpacked and checked for conformance with approved lab pack inventories.

If the waste stream or lab pack does not conform to previously approved paperwork, SET Environmental, Inc. will contact the generator in an effort to resolve the discrepancy. If the discrepancy requires further investigation, SET Environmental, Inc. will conditionally accept the waste if authorized by the generator until further analysis can be conducted. If the discrepancy cannot be resolved (this rarely

occurs) the waste will be returned to the generator or an alternate facility.

## **XI. RECORD KEEPING AND REQUIRED FORMS**

<i>INTERNAL RECORDS:</i>	The following records and documents are maintained by SET Environmental, Inc.: Contingency Plan (arrangements with local authorities included), Spill Prevention and Counter Measure Plan, Detailed Operating Record, Waste Minimization Program, Waste Analysis Plan, Inspection Schedule, Training Documentation including Job Title and Written Job Description for each position, and the name of each employee filling the position.
<i>WASTE PROFILE:</i>	Waste Profile sheets are required for each individual wastestream.
<i>LAB PACK INVENTORIES &amp; SUMMARY:</i>	Lab Pack inventories must be submitted with a Lab Pack summary form signed by the packaging agent and generator for each Lab Pack project.
<i>CYLINDER PROFILE:</i>	Cylinder Profiles must be submitted with each batch of cylinders for approval. In addition to the completed Gas Cylinder Profile, a Gas Cylinder Inspection and Evaluation Report must be completed and attached to the Profile. The Gas Cylinder Profile must be signed by the packaging agent and generator. If at all possible, include pictures of each cylinder.

Joyner Street

Outfall 001/Connection to  
Municipal Separate Storm Sewer

Cheswood Street

Storm Drain with  
Gate Valve

Carbon Beds Water Tank Pump House Nitrogen Tank

FUME  
HOOD

R1  
R2

Tanker Loading Area

H

G

F

Blind Sump to  
Storm Sewer

Rainwater Tank

Drum Loading Dock

Drum Sampling Area

ER

Carbon Bed Caustic Scrubber

Particulate Filter

Fume Hood

PT-2

Fume Hoods

A Caustic Scrubber

B Fume Hoods

D

C Fume Hoods

E

Scrubber  
Blow-down Tank

Laboratory

Change Room

Carbon Beds Compressor

Office Trailer

Etheridge Street

Key

	Grass Covered Surface
	Cement Surface
	Covered Sheet Metal Building
	Flammable Liquids
	Toxic or "Other Hazards"
	Pyrophoric
	Water Reactive
	Oxidizer
	Organic Peroxide
	Highly Toxic
	Acids (Corrosive)
	Bases (Corrosive)
	Drum Storage
	Compressed Gas Storage
	Tank Storage

LEGEND

FB = Fuel Blend Tank  
PT = Chemical Treatment Tank  
ER = Electrical Room  
--- Fire Door  
.... Fence  
== Secondary Containment



1 Inch = 26.2 feet

SET ENVIRONMENTAL, INC.  
FACILITY MAP





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

AUG 19 2003

Mr. Dan Didier  
Compliance Director  
SET Environmental, Inc.  
5738 Cheswood Street  
Houston, TX 77087

Dear Mr. Didier:

This letter is in response to your inquiries regarding the status of the SET Environmental, Inc., Houston, Texas facility, EPA ID #TXD055135388 (formerly Treatment One) authority to receive waste under the U.S. Environmental Protection Agency's (EPA) procedures for planning and implementing off-site response actions (the Off-site Rule - 40 CFR §300.440).

SET Environmental, Inc. Houston, Texas remains acceptable for the receipt of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) waste until such time as EPA notifies you otherwise in writing, provided that the facility's actual receipt of such waste is consistent with State law requirements and the requirements of any Federal program for which the State is authorized.

If you have any questions regarding this letter, you may write to me or contact Ron Shannon of my staff at (214) 665-2282.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Samuel Coleman".

Samuel Coleman, P.E.

Director

Compliance Assurance and  
Enforcement Division

Buddy Garcia, *Chairman*  
Larry R. Soward, *Commissioner*  
Bryan W. Shaw, Ph.D., *Commissioner*  
Mark R. Vickery, P.G., *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

August 29, 2008

Mr. Daniel Didier, Compliance Director  
SET Environmental, Inc.  
5738 Cheswood Street  
Houston, TX 77087

Re: Compliance Evaluation Investigation at:  
SET Environmental, 5738 Cheswood Street, Houston (Harris County), Texas 77087  
TCEQ SWR No.: 50267, Permit No.: 50267, EPA ID No.: TXD055135388

Dear Mr. Didier:

On August 14, 2008, Ms. Barbara Johnston and Mr. Marlin Bullard of the Texas Commission on Environmental Quality (TCEQ) Houston Region Office conducted an investigation of the above-referenced facility to evaluate compliance with applicable requirements for industrial and hazardous waste. During the investigation, two additional issues were noted which were addressed while investigators were on site. No further action is necessary concerning this investigation.

The TCEQ appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact Ms. Johnston in the Houston Region Office at 713-767-3756.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Ybarra".

Jason T. Ybarra  
Team Leader, Waste Section  
Houston Region Office

JTY/BEJ/tp

REPLY TO: REGION 12 • 5425 POLK ST., STE. H • HOUSTON, TEXAS 77023-1452 • 713-767-3500 • FAX 713-767-3520

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • Internet address: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)

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## **SUMMARY OF INVESTIGATION FINDINGS**

**SET Environmental, Inc.**  
**5738 Cheswood Street**  
**Houston (Harris County), Texas 77087**  
**TCEQ SWR No.: 50267; EPA ID No.: TXD055135388**  
**Investigation Date: August 14, 2008**

### **RESOLVED ADDITIONAL ISSUES**

During the site investigation on August 14, 2008, the following issues were observed and addressed while investigators were on site:

1. Two over-sized compressed gas cylinders were observed in Permitted Unit No. 04 with hazardous waste labels which could not be read because of the way they were positioned. SET personnel immediately had the cylinders moved to the correct position so that investigators could see the labels clearly, thus addressing the issue.
2. Ms. Johnston and Mr. Bullard observed several waste compressed gas cylinders labeled "Flammable Gas" being stored near waste containers labeled "Oxidizers" in Permit Unit No. 02. Mr. Didier immediately had SET personnel move the cylinders to the ignitable storage area, and provided a written explanation the following day to state why he felt the cylinders did not pose an incompatibility problem, and stating that from this point forward, the cylinders will not be stored near the oxidizers. Based on the response and the additional information provided, this issue has been adequately addressed by SET.